DOCUMENT RESUME

ED 230 828 CG 016 695

AUTHOR Wong, Tso Sang
TITLE Aging and Alienation: A Longitudinal Analysis.
PUB DATE Nov 82
NOTE 31p.; Paper presented at the Annual Scientific Meeting of the Gerontological Society (35th, Boston, MA, November 19-23, 1982).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Alienation; Emotional Adjustment; Gerontology; Interpersonal Relationship; Longitudinal Studies; *Marital Status; *Older Adults; Physical Activity Level; *Physical Health; *Retirement; Social Adjustment; *Social Isolation

ABSTRACT

Alienation has been a key concept and major area of empirical studies in sociology and psychology; however, most alienation studies have not dealt with the elderly. In an attempt to explore the effects of the aging process and the major events of later life on the aging person's vulnerability to alienation, older residents (50 years or more) in a small town (N=324) completed an initial questionnaire and two follow-up instruments at 2-year intervals. Data analyses indicated that the aging process was accompanied by a decline in alienation scores, suggesting that the later life stage is not necessarily vulnerable to alienation as earlier studies indicated. Retirement did not produce an accelerating effect on alienation scores, contradicting commonly held beliefs. Findings consistent with conventionally held beliefs showed that widowhood and poor health were likely to increase alienation, and an increase in the number of proximate relatives reduced alienation. Those findings which contradict earlier work may be due to differences in research design, methodology, and the characteristics of the sample population. (AG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED230828

AGING AND ALIENATION - A LONGITUDINAL ANALYSIS

Tso Sang Wong, Ph.D.
Scripps Foundation Gerontology Center
Miami University

CG 016695

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Tso Sang Wong

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Abstract

AGING AND ALIENATION - A LONGITUDINAL ANALYSIS

Alienation is a key concept and a major area of empirical studies in sociology and psychology but has received very little attention from gerontologists. The paper is an attempt to narrow this knowledge gap. Using longitudinal data gathered from a sample of the elderly population in a small town, I explored the effects of the aging process as well as some of the major events associated with later life on the aging individual's vulnerability to alienation. Several of the major findings are reported: 1) the aging process was accompanied by a decline in alienation scores, and this suggests that the later life stage in the human life course is not particularly vulnerable to the alienation plight as some theorists speculated; 2) retirement did not produce an accelerating impact on alienation scores. Findings about the impacts of changes in health conditions, marital status, level of activity, and social participation do not contradict the conventional wisdom.

Biographical Note

TSO SANG WONG is a Research Associate at Scripps Foundation Gerontology Center of Miami University. He earned his Ph.D. in sociology from the University of Missouri - Columbia. His interests in gerontology are focused on service delivery, alienation, age norms, and Asian elderly. His articles appeared in Journal of Community Development Society of America, Modern Asian Studies, and Journal of Social and Political Affairs.

AGING AND ALIENATION - A LONGITUDINAL ANALYSIS

The concept of alienation has occupied a central place in sociology since the discipline came into being. It is one of the most widely used theoretical concepts and a major area of empirical studies in modern sociology (Bryce-Loporter and Thomas, 1975; Geyer and Schweitzer, 1976; Israel, 1971; Johnson, 1973; Nisbet, 1967; Robinson, 1973; Seeman, 1975). Its popularity and importance are evident in sociological literature (Johnson, 1973; Robinson and Shaver, 1973). It is one of the largest categories in the Sociological Abstracts. However, such is not the case in sociological studies of aging. It is surprising to note that most alienation studies have ignored the elderly population and the aging process, while studies on alienation in respect to youth, adult work experiences, the culture of poverty, the working class, and juvenile delinquency have bloomed.

Occasional discussions on old age alienation suggest that old age is one of the stages in the human life course where alienation is most likely to develop and become acute (Bier, 1972). Bier (1972) sees a parallel between old age and youth regarding the vulnerability to alienation. The reasoning is that both the youth and the aged are not engaged in productive activities of the society and thus have no particular societal expectation to delineate their roles. It is further suggested that old age is more vulnerable than youth; that is, people tend to develop an expectation for certain roles in youth since there will be a point when they "will reach the stage of being a contributing,

recognized and appreciated member of society," (Bier, 1972:203) while people in old age seem to have lost such an expectation altogether (Harris and Cole, 1981).

THEORETICAL ISSUES

Disengagement theory provides the most systematic theoretical statements on the relation of alienation and old age, which seems to imply that alienation is a natural state resulting from a mutual withdrawal between the aged and society. For the aged individuals to accomplish a successful withdrawal, they have to relinquish the roles they occupied and reduce their active participation in society, and society should take away the roles played by the aged individuals and discourage their active participation (Cumming and Henry, 1966).

The essence of this theoretical statement is the concept of "role" or "role sets". The general line of theoretical reasoning is that a person's role sets change during the stages of life cycle. Old age differs from other stages in the aged individual's inability to replace lost roles with new ones. While roles continue to be discarded, new roles often do not take their place. Eventually, the role sets of the aged individuals begin to shrink (Harris and Cole, 1981). This results in "roleless role", "role losses" or "role ambivalence" (Atchley, 1980; Harris and Cole, 1981; Rosow, 1974). Retirement, widowhood, and death of friends and relatives are commonly identified as the major events in old age which result in role losses or role ambivalence. Harris and Cole (1981) hold that retirement and widowhood are the two most serious

role losses in later life. They maintain that the loss of the work role and the marital role in later life differs from role losses in earlier years because one's participation in the occupation structure and the nuclear family are ended and these events represent points at which the central tasks of men and women are terminated.

"Role ambivalence" is seen as an inevitable state of the major events characterizing old age. Rosow (1974) holds that norms for the aged do not exist or are weak and tenuous so that there is nothing to socialize the aged to. He further argues that the role loss and role ambivalence deprives the aged individual of vital functions as well as his social identity, bars him from social participation, and undermines his sense of self-worth and feeling of self-esteem. The end result is a feeling of devaluation and alienation.

To date, empirical studies on alienation and aging are too thin to substantiate these theoretical statements. Findings of two research on alienation do seem to be in line with such explanations (Angell, 1962; Dean, 1965). Angell (1962) reported that older people scored high on an alienation scale. Dean (1965) found that advancing age would be positively correlated with alienation. However, none of these studies actually focused on the effect of the aging process per se and all of them were cross-sectional in nature. Such cross-sectional studies may suggest cohort difference rather than aging effect (Hastings and Berry, 1980).

Indeed, the subfield of alienation studies of the aged is so under-developed that it really represents a knowledge gape in social gerontology

or psychogerontology. It is clear that much more systematic empirical studies are needed to narrow this gap. This paper attempts to contribute to the narrowing of this knowledge gap by exploring the effect of the aging process as well as some associated major life events on alienation.

DATA AND METHOD

The analysis is based on panel data with a four-year interval between initial and follow-up waves. The data were gathered as part of a study on the impact of retirement on adjustment to aging. In October, 1975, a questionnaire was mailed to all residents 50 years old or over identified in a small town in Ohio. This resulted in 1106 usable responses (a response rate of 73 percent) which constituted the initial sample. The panel was resurveyed in October of 1977 and 1979. Eight hundred and fifty-two responded in 1977 and 678 in 1979 (Atchley, 1981). The working sample for this analysis after deleting cases with incomplete information for scale construction consists of 324 respondents or 47.8 percent of the 1979 panel.

Although alienation is not the focus of the original design, the design contains question items that correspond or are similar to a widely used alienation scale. This allows the construction of a general alienation scale (total 23 items) and 4 subscales: powerlessness (5 items), normlessness (8 items), meaninglessness (3 items), and social estrangement (7 items). The items are listed in Table 1. The reliability coefficients (Alpha) of these scales indicate they are quite reliable and

- -

TABLES 1 AND 2 ABOUT HERE

- -

consistent (see Table 2). The correlation matrix of the subscales suggests the concept can be measured at either the one-dimensional or multi-dimensional level (see Table 3).

TABLE 3 ABOUT HERE

Five dependent variables were created for measuring changes in the general alienation scale and the four subscales between 1975 and 1979, by comparing the scores of the scales over time (1979-1975). These five variables are:

1) D alienation - difference in general alienation scores between two points of measurement (1979-1975);
2) D powerless - difference in powerlessness subscale scores between two points of measurement (1979-1975);
3) D normless - difference in normlessness subscale scores between two points of measurement (1979-1975);
4) D meaningless - difference in meaninglessness subscale scores between two points of measurement (1979-1975);
5) D estrangement - difference in social estrangement subscales scores between two points of measurement (1979-1975).

For analytical convenience, the nature and construction of the independent variables (particularly scales) will be discussed later when the results are presented.

Longitudinal data allow us to analyze the relation between alienation and the process of aging with control on the cohort effect. It can also be used in a quasi-experiemental design to determine the effect of some major events associated with later life on alienation, such as retirement, widowhood, loss of friends and relatives. For the data

analysis, two statistical techniques - T-test and analysis of variance - were applied.

RESULTS

In general, the panel reported lower alienation scores in 1979 than four years earlier. Differences in all scales are in the negative direction and are statistically significant.

In order to determine whether there is a cohort effect, the working sample was subdivided into eight 5-year cohort groups (54-58, 59-63, 64-68, 69-73, 74-78, 79-83, 84-88, 89-93), and then their change scores in all alienation scales were compared. The result of an analysis of variance indicates no statistically significant difference.

The effect of education was also examined by dividing the working sample into four groups (less than college, some college, completed college, and some post-graduate) and comparing the change scores in all alienation scales. The differences among these four groups are not statistically significant in all dependent variables.

Retirement

Several strategies were employed to explore and specify the effect of retirement on alienation. First, those people who had retired during the period from 1975 to 1979 were singled out as a group to compare with other groups, namely, those who had retired before 1975 and those who had not retired. In contrast, to a commonly held belief that retirement leads to alienation, I found contradicting evidence. The group which experienced retirement during the 1975-1979 period reported greatest

decline in scores of all alienation scales except meaninglessness (see Table 4). But the difference among groups is statistically significant only between new retirees and old retirees in estrangement subscale.

Second, the effect of recency of retirement was also examined. Three groups were compared: those retired between 1977-1979, those retired between 1975-1979, and those retired before 1975. The results seem to be consistent with Atchley's (1980) thesis that there is a honeymoon period immediately following retirement. Those most recently retired (retired between 1977-1979) show the greatest decline in scores of all alienation scales. However, the difference among groups is again statistically significant only between the first group and the third group in estrangement subscale (Table 4).

Third, in comparison with retirees who did not work after retirement, those who did generally reported greater decline in alienation scores. Again, the difference is not statistically significant (Table 4).

Fourth, the impact of income difference on the change of alienation scores was also evaluated. In the absence of accurate income data, I compared those who perceived their retirement income as adequate with those who did not. The former group's scores decrease in all alienation scales, while the latter group's scores indicate an opposite trend. However, the difference between the two groups is not statistically significant (Table 4).

Fifth, it is found that there is no marked difference between early retirees (retired before 65) and late retirees (retired at 65 or after) in terms of the change in alienation scores (Table 4).

- -

TABLE 4 ABOUT HERE

- -

Finally, the influence of the retirees' perception about job goal accomplishment on the changes in their alienation scores was also examined. Few in the final working sample indicated that their job goal had not been met. Those who indicated total job goal accomplishment reported greater decline in alienation scores than those who indicated partial job goal accomplishment did (Table 4).

There was an attempt to assess the impact of retirees' attitude toward their work on change scores of alienation scales. However, few retirees in the final working sample express negative feeling toward their work. No meaningful comparison is feasible.

Change in Marital Status

Changes in marital status, especially widowhood, is a major event in later life and believed to have an impact on people's life satisfaction and morale. In this study, we did not specifically assess the impact of widowhood on people's alienation scores because the cases of those who had experienced widowhood during 1975-1979 period are too few in the final working sample to allow a meaningful comparison. Instead, we focused on a comparison on the change of marital status. The results show that there is no marked difference between those who had experienced change and those whose marital status remained stable during the period from 1975-1979. However, a comparison of groups based on classification of current marital status in 1979 reveals that those who had never married reported greatest decline in scores on almost all alienation scales, except the meaningless and self-estrangement subscales. Those who remained married also reported decline in scores on all alienation scales except powerlessness. In contrast, the widow group indicated an

increase. The differences among the three groups are statistically significant only between those who were widows with those who had never married on normlessness subscale, and with those who remained married on estrangement subscale (Table 5).

Effects of Changes in Immediate Social Network

In addition to the effect of changes in marital status, the effects of changes in other aspects of the elderly persons' immediate social network were also examined. In regard to living arrangement, the 1975 questionnaire did not provide information about whether the subjects were living with their children or not. Thus, a comparison between times is not possible. Consequently, we compared two groups: those who had living children and those who did not in 1979. The results show that the difference between these two groups is statistically significant in change scores on all alienation scales (Table 5).

The second aspect examined is the impact of the quantitative changes in terms of number of relatives living within 30 miles. It shows that those who had a stable number of relatives in the vicinity reported the greatest decline in scores on all alienation scales and those who reported an increase in number of relatives showed the next greatest decline, while those who had fewer relatives reported an increase expect in the powerlessness and self-estrangement scales. The difference is statistically significant only between the latter and the former two groups in regard to change scores of the general alienation scale and self-estrangement subscales (Table 5).

- -

TABLE 5 ABOUT HERE

- -

The difference in quantitative change of number of friends living within 30 miles did not produce marked impact on the changes in alienation scores (Table 5).

Changes in Health Conditions

Changes in health conditions is generally believed to be a critical factor affecting people's subjective life satisfaction in later life (Adams, 1971). In this study, its impact on changes in alienation scores were examined. The working sample was divided into three groups: 1) those reporting improvement; 2) those remaining stable; and 3) those reporting a deterioration in health conditions. As can be expected, the first and second groups showed a decline in scores on all alienation scales, while the third group reported the opposite. The difference is statistically significant between the third group and the first or second group in change scores on general alienation scale and between the third group and second group in change scores on normlessness, meaninglessness, and self-estrangement subscales (Table 6).

- -

TABLE 6 ABOUT HERE

- -

Changes in Activity and Social Participation Levels

The relation between social well-being of the aging person and his/her activity level and social participation is a focus of controversy in social gerontology (Atchley, 1981; Decker, 1981; Harris and Cole, 1981). While the activity theorists argue that maintaining socially active is essential for the social well-being of the aged, the disengagement theorists suggest the opposite. In this study, the impact of changes in activity level and the social participation level of the aging persons on the changes and their alienation scores was examined. Activity

level is a scale constructed by summing the activity ranges of good items (non-missing value), dividing by number of good items, and then multipling by 18. If more than one item was missing, the scale score is missing. The range of the scale value is from 18 to 108, the higher the score, the higher the activity level.

Social participation is a scale constructed by summing the values of a total of six activity items related to participation in political elections, farm organizations, church functions or parties, and interaction with neighbors or friends, children or grandchildren. The range is from 6 to 36; the higher the score, the higher the social participation level.

As Table 6 indicates, increase in activity level was accompanied by a decrease in alienation scores. Those who reported an increase in activity level showed the greatest decline in scores on the general alienation scale and social estrangement subscale, while those who reported a decrease in activity level showed the least. Although the direction of the impact is obvious, the difference among groups is not statistically significant in change scores on almost all alienation scales except social estrangement (in which those who showed an increase in activity level differ from those who showed a decrease).

The impact of changes in social participation level shows a different pattern. Instead of those who reported an increase, those who maintained the same level of social participation level showed the greatest decline in alienation scores, while those who reduced their social participation reported the least. Again, the difference among the three groups is not statistically significant (Tabe 6).

DISCUSSION

This study represents the first attempt to study deliberately the impact of the human aging process as well as the social events associated with later life on the aged individuals' vulnerability to alienation plight. Based on longitudinal data, this study is able to examine directly the aging effect on the same group of individuals rather than to infer indirectly from a comparison of different age groups, as most cross-sectional studies have been able to do. Unlike cross-sectional studies which usually report inseparable aging effect and cohort effect, longitudinal data permit us to separate them in order to single out the aging effect.

Several findings contradictory to the commonly held belief have been reported in this paper: 1) The aging process in later life seems to be accompanied by a decline in alienation scores; in other words, the later life stage in the human life course is not particularly vulnerable to the alienation plight as some theorists speculated. 2) Retirement does not produce an accelerating impact on alienation scores. Instead, it suggests the opposite in this study. Findings about the impacts of changes in marital status, health conditions, immediate social network, level of activity, and social participation do not contradict the conventional wisdom. Widowhood was shown to be likely to increase the acuteness of alienation plight; deterioration in health conditions tended to increase the alienation scores; and an increase in the number of relatives in the vicinity contributed to the reduction of alienation scores.

It is possible that the contradictory pictures between the findings of this study and the previously conducted studies are the results of differences in research design, methodology, and the characteristics of the populations under study. First of all, this study differs from other studies in research design. Based on cross-sectional design with an inherent methodological problem of not being able to separate aging effect from cohort effect, the previously conducted research reported mainly the cohort effect or the combination of cohort and aging effect, and consequently underestimated the aged individuals' ability to overcome the alienation plight. In constrast, this study, based on a longitudinal design with an inherent methodlogical problem of keeping exceptional cases in the panel because the selective dropout problem tends to eliminate subjects with lower coping ability, may overestimate the individual's ability.[1] Secondly, unlike most previously conducted studies which were conducted in urban settings, this study was carried out in a small town community setting. It is possible that the aged individuals in small towns have closer community ties and more frequent and satisfactory social interaction within the community so that they are less likely to suffer from alienation plight. Thirdly, the difference in the ways the scales were constructed and the ways the questions were asked may also contribute to the contradiction. This is identified as

---

[1]In the field of intelligence testing, it is suggested that cross-sectional studies tend to underestimate the elderly persons' intelligence and longitudinal studies tend to overestimate (Horn and Donaldson, 1980).

a major problematic area in alienation studies (Robinson and Shaver, 1973).

Therefore, it must be emphasized that, although this study represents an effort to fill a knowledge gap in social gerontology, it is basically exploratory in nature and its findings are far from conclusive. For a more conclusive theoretical thesis, more theorizing and empirical research needs to be done. We hope to see it happen in the near future.

Table 1. Items for Construction of the

General Alienation Scale and Four Subscales

General Alienation Scale (13 items)

Powerlessness Subscale (5 items)

*C 1) I can do just about anything I set my mind to
*C 3) My life seems doomed to failure
*C 4) I am afraid to talk to people in authority
*M 11) I am afriad of a lot of things
*R Independent-Dependent

Normlessness Subscale (8 items)

*M 9) I have a lot to be sad about
*M 10) People had it better in the old days
*M 12) I get mad more than I used to
*M 14) A person has to live for today and not worry about tomorrow
*R Hopeful-Hopeless
*R Happy-Sad
*R Good-Bad
*G 11) Being seen as a good person

Meaninglessness Subscale (3 items)

*R Full-Empty
*R Worthy-Worthless
*R Meaningful-Meaningless

Social Estrangement Subscale (7 items)

*G 1) Being well-read and informed
*G 2) Having close ties with my family
*G 3) Being prominent in community affairs
*G 6) Forming close, long-lasting friendships
*G 10) Having roots in community
*G 15) Having a close, intimate relationship with another person
*R Involved-Uninvolved

NOTE: 1. Items with *C are semantic differentials with range from 1 to 5; items with *M are "yes" or "no" questions; items with *R are semantic differentials with range from 1 to 7; items with *G are semantic differentials with range from 1 to 4. The direction of each item is rearranged to correspond to the general direction of alienation scale (the higher the score, the higher the alienation level). If an item has a missing value, the scale is missing. So does the case.

2. Scale ranges: General Alienation 23-99; powerlessness 5-24; normlessness 8-32; meaninglessness 3-12; social estrangement 7-32.

Table 2. Reliability Coefficients of the General Alienation Scale and Four Subscales for 1975 and 1979 data sets

Scale Name	1975	1979
General Alienation	.823	.817
Powerlessness	.518	.561
Normlessness	.557	.605
Meaninglessness	.857	.886
Social Estrangement	.628	.572

Table 3. Correlation Matric of the Four Subscales

	Powerlessness		Normlessness		Meaningless-ness		Social Estrangement	
	1975	1979	1975	1979	1975	1979	1975	1979
Powerlessness	1.000	1.000						
Normlessness	.498	.488	1.000	1.000				
Meaninglessness	.557	.490	.726	.685	1.000	1.000		
Social Estrangement	.250	.277	.349	.341	.381	.376	1.000	1.000

Table 4. Retirement Effects

GROUPINGS	(N)	D alienation ($\bar{X}$)	D powerlessness ($\bar{X}$)	D normlessness ($\bar{X}$)	D meaninglessness ($\bar{X}$)	D estrangement ($\bar{X}$)
Grouping I						
A. New Retirees ('75-79)	(62)	-1.613	-0.129	-0.500	-0.081	-0.903
B. Old Retirees (before 1975)	(84)	-0.298	0.012	-0.214	0.000	-0.095
C. Not Retired	(144)	-0.938	0.049	-0.326	-0.250	-0.410
Groups with statistically significant differences		Nil	Nil	Nil	Nil	A vs. B
Grouping II						
A. New-New Retirees (1977-79)	(33)	-2.182	-0.152	-0.818	-0.121	-1.091
B. Old-New Retirees (1975-77)	(30)	-0.933	-0.033	-0.100	-0.100	-0.700
C. Old Retirees (before 1975)	(84)	-0.298	0.012	-0.214	0.000	-0.095
Groups with statistically significant differences		Nil	Nil	Nil	Nil	A vs. C
Grouping III						
A. Retired-working	(188)	-1.000	0.005	-0.298	-0.223	-0.484
B. Retired-not working	(102)	-0.706	-0.010	-0.392	0.010	-0.314
Groups with statistically significant differences		Nil	Nil	Nil	Nil	Nil
Grouping IV						
A. Retired-Adequate income	(262)	-1.061	-0.011	-0.359	-0.176	-0.515
B. Retired-Inadequate income	(28)	0.643	-0.107	-0.071	0.179	0.429
Groups with statistically significant differences		Nil	Nil	Nil	Nil	A vs. B
Grouping V						
A. Early Retirees (before 65)	(96)	-1.115	0.010	-0.573	-0.146	-0.406
B. Late Retirees (after 65)	(41)	-0.902	-0.415	-0.073	-0.098	-0.317
Groups with statistically significant differences		Nil	Nil	Nil	Nil	Nil

Table 4. Retirement Effects (continued)

GROUPINGS	(N)	D alienation ($\bar{X}$)	D powerlessness ($\bar{X}$)	D normlessness ($\bar{X}$)	D meaninglessness ($\bar{X}$)	D estrangement ($\bar{X}$)
Grouping VI						
A. Job Goal Partially Met	(111)	-0.270	0.180	-0.081	0.099	-0.468
B. Job Goal Met	(143)	-2.007	-0.224	-0.748	-0.469	-0.566
Groups with statistically significant differences		Nil	A vs. B	Nil	Nil	Nil

Table 5. Effects of Changes in Marital Status and Immediate Social Networks

GROUPINGS	(N)	D alienation ($\bar{X}$)	D powerlessness ($\bar{X}$)	D normlessness ($\bar{X}$)	D meaninglessness ($\bar{X}$)	D estrangement ($\bar{X}$)
Effects of Changes in Marital Status						
Grouping I						
A. Change	(40)	-0.875	-0.175	-0.310	0.250	-0.750
B. Not Change	(284)	-0.951	0.018	-0.200	-0.246	-0.412
Groups with statistically significant differences		Nil	Nil	Nil	Nil	Nil
Grouping II						
A. Never Married	(24)	-2.208	-0.333	-1.292	-0.250	-0.333
B. Remains Married	(242)	-1.165	0.050	-0.401	-0.256	-0.558
C. Widowed	(38)	0.842	-0.132	0.500	0.079	0.395
Groups with statistically significant differences		Nil	Nil	A vs. C	Nil	B vs. C
Effects of Changes in Immediate Social Network						
Grouping I						
A. Relatives increase	(133)	-1.503	0.020	-0.443	-0.456	-0.624
B. Relatives stable	(26)	-2.741	-0.333	-0.830	-0.556	-1.222
C. Relatives decrease	(132)	-0.047	0.027	-0.086	0.155	-0.142
Groups with statistically significant differences		A B vs. C	Nil	Nil	A B vs. C	Nil
Grouping II						
A. Friends increase	(36)	-0.639	-0.222	-0.083	-0.444	0.111
B. Friends stable	(10)	0.200	0.500	-0.200	0.500	-0.600
C. Friends decrease	(278)	-1.022	0.004	-0.327	-0.176	-0.522
Groups with statistically significant differences		Nil	Nil	Nil	Nil	B vs. C
Grouping III						
A. Have living children	(281)	-0.940	0.032	-0.256	-0.238	-0.477
B. Have no living chilren	(42)	-0.952	-0.214	-0.511	0.167	-0.383
Groups with statistically significant differences		Nil	Nil	Nil	Nil	Nil

Table 6. Effects of Changes in Health Conditions, Activity Level, and Social Participation Level

GROUPINGS	(N)	D alienation ($\bar{X}$)	D powerlessness ($\bar{X}$)	D normlessness ($\bar{X}$)	D meaninglessness ($\bar{X}$)	D estrangement ($\bar{X}$)
Effects of Changes in Health Conditions						
Grouping I						
A. Health improved	(41)	-1.122	-0.146	-0.488	-0.268	-0.220
B. Health stable	(203)	-1.695	-0.089	-0.498	-0.424	-0.685
C. Health deficient	(80)	1.063	0.275	0.313	0.463	0.013
Groups with statistically significant differences		A B vs. C	Nil	B vs. C	B vs. C	B vs. C
Effects of Change in Activity Level and Social Participation						
Grouping I						
A. Activity level increased	(73)	-2.055	-0.055	-0.699	-0.260	-1.151
B. Activity level stable	(20)	-0.950	-0.150	-0.100	-0.300	-0.400
C. Activity level decreased	(231)	-0.589	-0.013	-0.186	-0.152	-0.238
Groups with statistically significant differences		Nil	Nil	Nil	Nil	A vs. C
Grouping II						
A. Social participation level increased	(210)	-1.129	0.086	-0.414	-0.243	-0.557
B. Social participation level stable	(20)	-1.400	-0.050	-0.550	-0.700	-0.100
C. Social participation decreased	(94)	-0.426	-0.202	0.021	0.053	-0.298
Groups with statistically significant differences		Nil	Nil	Nil	Nil	Nil

REFERENCES

Angell, R.
1962 "Preferences for moral norms in three problem areas." American Journal of Sociology. 67:650-672.

Atchley, R.
1980 Social Forces in Later Life. Belmont, California: Wadsworth Publishing Co..

Bier, W.
1972 Alienation: Plight of Modern Man? New York: Fordham University Press.

Bryce-Loporter, R. and C.S. Thomas
1976 Alienation in Contemporary Society: A Multidisciplinary Examination. New York: Prasger Publishers, Inc..

Cumming, E. and W.E. Henry
1966 Growing Old. New York: Basic Books

Dean, D.
1961 "Alienation: its meaning and measurement." American Sociological Review. 26:753-768.

Geyer, F. and D.R. Schweitzer
1976 Theories of Alienation. Leiden, Netherlands: H.E. Stanfert Kroese bv..

Harris, D. and W.E. Cole
1980 Sociology of Aging. Boston: Houghton Mifflin Company

Hasting, D. and L.G. Berry (eds.)
1979 Cohort Analysis: A Collection of Interdisciplinary Readings. Oxford, Ohio: Scripps Foundation Gerontology Center, Miami University.

Horn, J. and R. Donaldson
1980 "Cognitive development II: adulthood development of human ability," in V.G. Brim and J. Kagan (eds), Consistance and Change in Human Development. A Volume of Concern Essays. Cambridge, Massachusetts: Harvard University Press.

House, J. and W.M. Mason
1975 "Political alienation in America." American Sociological Review. 40:123-147.

Israel, J.
1977 Alienation: From Marx to Modern Sociology. Boston: Allyn & Bacon.

Johnson, H.M.
1973 Alienation: Concept, Term and Meanings. New York: Seminar Press.

Neal, A. and S. Retting
1963 "Dimensions of alienation among manual and non-manual workers." American Sociological Review. 28:599-608.

1967 "On the multidimensionality of alienation." American Sociological Review. 32:54-63.

Neal, A. and H.T. Groat.
1975 "Social class correlates of stability and changes in levels of alienation: a longitudinal study." Sociology Quarterly.

Nisbet, R.
1967 The Sociological Tradition. New York: Basic Books.

Robinson, J. and P.R. Shaver
1973 Measures of Social Psychological Attitudes. Ann Arbor, Michigan: Surrey Research Center, University of Michigan.

Rosow, I.
1967 Social Integration of the Aged. New York: Free Press.

Seeman, M.
1959 "On the meaning of alienation." American Sociological Review. 9:67-73.

1967 "Powerlessness and knowledge: a comparative study of alienation and learning." Sociometry. 30:105-123.

1972 "Alienation and knowledge-seeking: a note on attitude and action." Social Problems. 20:3-17.

Srole, L.
1956 "Social integration and certain corolleries: an exploratory study." American Sociological Review. 21:709-716.